

InCommon Library Collaborative

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Summary

Several college and university library IT professionals formed the InCommon Library collaboration to explore methods for fine-grained control of access to licensed resources, leveraging the campus identity management system while accommodating a wide variety of users. One goal was to move away from IP-address-based authentication. The collaboration tested and recommended a hybrid of EZproxy (widely deployed among libraries) and Shibboleth (a single sign-on solution for accessing on-campus and off-campus resources).

The group also developed best practices, a registry of resources, and organized a method for encouraging library resource providers to join InCommon, adding value for adopting the hybrid solution.

Background and Purpose

Libraries face special situations in making online resources available. For instance:

- The catalog may be open to all who enter the building.
- Specialized databases may be open to anyone physically in the library.
- Databases may be open to those with university credentials regardless of their physical location.
- Some resources may be open only to students and faculty in a certain field (such as the law school or medical school).

Add to this the desire for campus-wide single sign-on, remote access for those with university credentials, and providing a positive experience for walk-in public users; and the situation becomes complex.

Several libraries formed the InCommon-Library collaboration to explore various potential solutions. The focus was to improve access to licensed electronic resources, identify

user scenarios, document business practice and technology issues, and test proposed solutions.

The desired outcomes were:

- finding or creating technology alternatives to IP-address-based access control.
- determining and documenting best practices for resource providers and libraries.
- documenting use cases that would allow the development and extension of the recommended technology
- enhancing the value proposition by encouraging additional resource providers to federate their services

Technology Discussion

After researching and discussing alternatives, the collaboration settled on developing a Shibboleth-EZproxy hybrid as the best method for providing federated access to protected library resources.

EZProxy (a product of OCLC) is middleware that authenticates library users against local authentication systems and provides remote access to licensed content based on the user's authorization. EZproxy provides a solution for off-campus access to resources and is widely used for remote access. One benefit of using EZProxy is the ability to integrate Shibboleth and single sign-on authentication.

Shibboleth is open-source single sign-on software developed using SAML (an XML-based standard), for managing the interaction between the library, the campus identity system and the resource provider. With Shibboleth in place, individuals can use their campus credentials to log in and access internal and external resources. Shibboleth is attractive because it leverages the university's existing identity infrastructure, protects user privacy, and provides fine-grained access control to protected content, depending on the vendor's license with the university. Shibboleth also provides single sign-on access to internal campus and library resources.

Benefits

The Shibboleth/EZProxy hybrid solution offers benefits to:

- *Users* – single userID and password.
- *Librarians* – reduced cost and support, with far less IP and proxy maintenance. Also, permits rollout of additional Shib-enabled resources while keeping the user experience consistent.
- *Library administration* – provides central usage statistics.
- *Vendors* – no maintenance of password information (since Shib leverages the university's identity management system), authoritative validation, and quick breach investigation.

Implementation

The collaboration enumerated basic use cases, identified barriers to library adoption, tested the feasibility of various solutions, and tested the hybrid solution on different campuses with several vendors. This resulted in substantial documentation regarding the Shibboleth/EZproxy approach.

Bedtime Stories and Use Cases

Bedtime stories state, in simple and clear language, the experience desired by the end-user. The story will describe a set of actions a user wants to take in support of some goal – for example, preparing for class or writing a research paper. The bedtime stories help to identify how one or more technologies support a process, as well as helping to identify failures or absences in currently available technologies.

Use cases are similar to bedtime stories, in that they provide a set of possible sequences of interactions between end-users and the technology, and help to identify and organize functional requirements. The collaboration has developed a number of use cases (and some diagrams) specific to the Shibboleth/EZproxy hybrid.

Best Practices

As part of its effort, the collaboration group developed best practices that apply to both service providers and libraries. These best practices serve as a guideline for service providers and will, if implemented, allow libraries to maintain the seamless access that they can typically provide with IP-based authentication, as well as preparing for service providers' desire to provide personalized services. The best practices are available at www.incommon.org/library.

Registry of Resources

The intent of this registry is to provide a checklist for library vendors interested in (or already providing) a SAML-based implementation, and to provide implementation details for universities interested in a SAML-based implementation. The registry includes information such as whether the vendor is an InCommon participant, offers support for WAYF-less access and direct linking, and the URL syntax (www.incommon.org/library).

Attracting Service Providers

Finally, the group established a collaborative approach for encouraging library database providers and other vendors to join InCommon. The group developed a list of vendors that were already members of the U.K. federation and produced a list of U.S. libraries interested in federating with these vendors. These libraries then approached the vendors with a coordinated approach to encouraging participation in InCommon. As a result, several library resource providers have joined InCommon.

Documentation

There are a number of other documents and presentations available; you will find a complete list at www.incommon.org/library. Two particularly helpful pieces of information include:

- A webinar (January 2010) that summarizes the collaboration's efforts (<http://internet2.na6.acrobat.com/p78943520/>).
- A guide with details on setting up a Shibboleth/EZproxy hybrid (<https://spaces.internet2.edu/display/inclibrary/Shibboleth+-+EZproxy+HOW-TO>).

Other documentation includes:

- Use cases: <https://spaces.internet2.edu/x/O4Og>
- Campus pilots and tests:

- University of North Carolina -
https://spaces.internet2.edu/download/attachments/14160/Ingham_MAR_C10.pdf (PDF of a slide deck)
- University of Maryland –
<https://spaces.internet2.edu/display/inclibrary/Testing+ezproxy+workflow+with+EBSCO+Interface>
- University of Chicago -
<https://spaces.internet2.edu/display/inclibrary/University+of+Chicago+Profile+and+Project+Update>
- University of California San Diego
<https://spaces.internet2.edu/display/inclibrary/University+of+California+-+San+Diego+Profile+and+Project+Update>
- Campus experiences with EZproxy:
 - University of Chicago -
<https://spaces.internet2.edu/display/inclibrary/EZproxy+at+UChicago>
 - University of Maryland system -
<https://spaces.internet2.edu/display/inclibrary/EZproxy+at+USMAI>